

What is claimed is:

- 1 1. A process executed on a computer for defining services listed in an IT services
2 catalog, comprising the steps:
- 3 (1) displaying a plurality of icons or menu choices which can be selected to
4 start the process of creating a new service, or modifying a preexisting service and/or
5 resource, or define cost information or define a service action;
- 6 (2) if an icon or menu choice is selected to start the process of creating a
7 new service, displaying one or more displays soliciting information from a user to
8 name the service and define the fields and contents thereof for a data structure
9 which defines an instance of said service and define attributes of each field including
10 validation constraints and validation formulas, and receiving and storing any data
11 entered by a user in response to said displays;
- 12 (3) if an icon or menu choice is selected to start the process of defining a
13 relationship, displaying one or more displays soliciting information as to which
14 preexisting service or IT resource to which the data structure of a service will point
15 and receiving and storing any data entered by a user in response to said displays so
16 as to allow a hierarchy of services to be defined by entry of said pointers;
- 17 (4) if an icon or menu choice is selected indicating a user wishes to enter cost
18 information, displaying one or more displays which solicit the user to enter information
19 that define the name of a cost information formula and the cost information formula
20 itself, and receiving and storing any data entered by a user in response to said
21 displays; and
- 22 (5) if an icon or menu choice is selected indicating a user wishes to define a
23 service action, displaying one or more displays that solicit the name of the service
24 action to be defined and to define the fields and contents thereof for a data structure
25 which defines an instance of said service action and attributes for each field, and
26 receiving and storing any data entered by a user in response to said displays, said
27 one or more displays also allowing a user to enter pointer data which defines
28 relationships between service actions in a hierarchy of service actions to create,
29 modify or destroy instances of services.

1 2. The process of claim 1 wherein the process of creating each field in a data
2 structure allows text, numbers or formulas to be stored in the field as if the field were a
3 spreadsheet cell, and further comprising the steps of determining if a user is a high level or
4 low level user and, if a high level user has logged in who needs the assistance of building
5 blocks or primitives, displaying a palette of building blocks which the user can use to define
6 services or service actions or relationships therebetween, and receiving user input
7 regarding which building blocks the user wishes to combine and how the user wishes to
8 combine them, and then using the data in the data structures of the building blocks to
9 populate the fields of the data structure of the service or service action the user is attempting
10 to define.

1 3. The process of claim 1 wherein the process of creating each field of a data
2 structure allows attributes to be defined for each field which define whether the field is
3 configurable, whether the data of a field can be overridden by new data entered by a user,
4 and which define constraints for the field in the form of formulas that define maximum and/or
5 minimum limits for a field or which define a property which must be true about the content of
6 said field.

1 4. The process of claim 2 wherein the process of creating each field of a data
2 structure allows attributes to be defined for each field which define whether the field is
3 configurable, whether the data of a field can be overridden by new data entered by a user,
4 and which define constraints for the field in the form of formulas that define maximum and/or
5 minimum limits for a field or which define a property which must be true about the content of
6 said field.

1 5. The process of claim 1 wherein step 2 further comprises the steps of:
2 displaying one or more displays which solicit the user to enter data defining:
3 a database model which defines the information stored in a data
4 structure that defines an instance of said service;
5 one or more relationship fields each of which contains a pointer to
6 another IT service and/or resource which said IT service is an extension of or
7 which will be utilized in said IT service;

one or more cost information fields each of which which records formulas that are used to compute the cost of implementing or using said service;

one or more service action fields, each of which contains a pointer to a data structure which defines an instance of a service action, each service action defining an action that can be taken when a service is used such as create, modify or delete.

6. The process of claim 5 wherein step 5 of creating one or more service action data structures comprises the steps of:

defining one or more models that define the information that is stored in a database or data structure which define an instantiation of said service action;

defining one or more relationship fields which contain pointers to other service actions or resources so as to define a heirarchy of service actions if any;

defining one or more fields which contain formulas for computing the cost to perform said service action one time;

defining one or more fields that contain schedule information or a formula to compute an approximate time to complete a service action and/or how soon said service action can start;

defining a field that contains a pointer to a fulfillment workflow data structure and defining said fulfillment workflow structure in the form of a specification of the steps that need to be performed to accomplish said service action and the order, if any, in which the steps need to be performed;

defining one or more fields that contain validation logic in the form of constraints on the values of one or more fields and/or validation formulas to determine whether a value in a field satisfies a constraint; and

defining one or more fields that contain an approval workflow in the form of a specification of the steps that need to be performed to accomplish approval by management to carry out said service action.

7. The apparatus of claim 6 wherein said step of defining said data structure of said fulfillment workflow includes the steps of defining the physical and/or logical resources which will be required to accomplish each step in said workflow.

1 8. The apparatus of claim 6 wherein said step of defining said data structure of said
2 fulfillment workflow includes the steps of defining the particular IT professional or the skill set
3 needed by an IT professional to accomplish each manual task in said fulfillment workflow.

1 9. A computer programmed to carry out the following steps:

2 (1) displaying a plurality of icons or menu choices which can be selected to
3 start the process of creating a new service, establishing a relationship between a
4 new service and a preexisting service and/or resource, define cost information or
5 define a service action;

6 (2) if an icon or menu choice is selected to start the process of creating a
7 new service, displaying one or more displays soliciting information from a user to
8 name the service and define the fields and contents thereof for a data structure
9 which defines an instance of said service and define attributes of each field including
10 validation constraints and validation formulas, and receiving and storing any data
11 entered by a user in response to said displays;

12 (3) if an icon or menu choice is selected to start the process of defining a
13 relationship, displaying one or more displays soliciting information as to which
14 preexisting service or IT resource to which the data structure of a service will point
15 and receiving and storing any data entered by a user in response to said displays;

16 (4) if an icon or menu choice is selected indicating a user wishes to enter cost
17 information, displaying one or more displays which solicit the user to enter information
18 that define the name of a cost information formula and the cost information formula
19 itself, and receiving and storing any data entered by a user in response to said
20 displays; and

21 (5) if an icon or menu choice is selected indicating a user wishes to define a
22 service action, displaying one or more displays that solicit the name of the service
23 action to be defined and to define the fields and contents thereof for a data structure
24 which defines an instance of said service action and attributes for each field, and
25 receiving and storing any data entered by a user in response to said displays.

1 10. The computer of claim 9 further programmed to carry out the following steps
2 when carrying out step 2:

3 displaying one or more displays which solicit the user to enter data defining:
 4 a database model which defines the information stored in a data
 5 structure that defines an instance of said service;
 6 one or more relationship fields each of which contains a pointer to
 7 another IT service and/or resource which said IT service is an extension of or
 8 which will be utilized in said IT service;
 9 one or more cost information fields each of which which records
 10 formulas that are used to compute the cost of implementing or using said
 11 service;
 12 one or more service action fields, each of which contains a pointer to
 13 a data structure which defines an instance of a service action, each service
 14 action defining an action that can be taken when a service is used such as
 15 create, modify or delete.

1 11. The computer of claim 10 further programmed to carry out the following steps
 2 when carrying out step 5 to define a service action:
 3 defining one or more models that define the information that is stored in a
 4 database or data structure which define an instantiation of said service action;
 5 defining one or more relationship fields which contain pointers to other service
 6 actions or resources;
 7 defining one or more fields which contain formulas for computing the cost to
 8 perform said service action one time;
 9 defining one or more fields that contain schedule information or a formula to
 10 compute an approximate time to complete a service action and/or how soon said
 11 service action can start;
 12 defining a field that contains a fulfillment workflow in the form of a
 13 specification of the steps that need to be performed to accomplish said service action
 14 and the order, if any, in which the steps need to be performed;
 15 defining one or more fields that contain validation logic in the form of
 16 constraints on the values of one or more fields and/or validation formulas to determine
 17 whether a value in a field satisfies a constraint; and

1 8 defining one or more fields that contain an approval workflow in the form of a
1 9 specification of the steps that need to be performed to accomplish approval by
2 0 management to carry out said service action.

1 12. A computer readable medium having computer-executable instructions for
2 performing a method comprising:

3 (1) displaying a plurality of icons or menu choices which can be selected to
4 start the process of creating a new service, establishing a relationship between a
5 new service and a preexisting service and/or resource, define cost information or
6 define a service action;

7 (2) if an icon or menu choice is selected to start the process of creating a
8 new service, displaying one or more displays soliciting information from a user to
9 name the service and define the fields and contents thereof for a data structure
1 0 which defines an instance of said service and define attributes of each field including
1 1 validation constraints and validation formulas, and receiving and storing any data
1 2 entered by a user in response to said displays;

1 3 (3) if an icon or menu choice is selected to start the process of defining a
1 4 relationship, displaying one or more displays soliciting information as to which
1 5 preexisting service or IT resource to which the data structure of a service will point
1 6 and receiving and storing any data entered by a user in response to said displays;

1 7 (4) if an icon or menu choice is selected indicating a user wishes to enter cost
1 8 information, displaying one or more displays which solicit the user to enter information
1 9 that define the name of a cost information formula and the cost information formula
2 0 itself, and receiving and storing any data entered by a user in response to said
2 1 displays; and

2 2 (5) if an icon or menu choice is selected indicating a user wishes to define a
2 3 service action, displaying one or more displays that solicit the name of the service
2 4 action to be defined and to define the fields and contents thereof for a data structure
2 5 which defines an instance of said service action and attributes for each field, and
2 6 receiving and storing any data entered by a user in response to said displays.

1 13. The computer readable medium of claim 12 wherein said computer-executable
2 instructions include instructions to perform the following steps when performing step 2 of the
3 method:

4 displaying one or more displays which solicit the user to enter data defining:
5 a database model which defines the information stored in a data
6 structure that defines an instance of said service;
7 one or more relationship fields each of which contains a pointer to
8 another IT service and/or resource which said IT service is an extension of or
9 which will be utilized in said IT service;
10 one or more cost information fields each of which which records
11 formulas that are used to compute the cost of implementing or using said
12 service;
13 one or more service action fields, each of which contains a pointer to
14 a data structure which defines an instance of a service action, each service
15 action defining an action that can be taken when a service is used such as
16 create, modify or delete.

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1 14. The computer readable medium of claim 13 wherein said computer-executable
2 instructions include instructions to perform the following steps when performing step 5 of the
3 method:

4 defining one or more models that define the information that is stored in a
5 database or data structure which define an instantiation of said service action;
6 defining one or more relationship fields which contain pointers to other service
7 actions or resources;
8 defining one or more fields which contain formulas for computing the cost to
9 perform said service action one time;
10 defining one or more fields that contain schedule information or a formula to
11 compute an approximate time to complete a service action and/or how soon said
12 service action can start;
13 defining a field that contains a fulfillment workflow in the form of a
14 specification of the steps that need to be performed to accomplish said service action
15 and the order, if any, in which the steps need to be performed;

16 defining one or more fields that contain validation logic in the form of
17 constraints on the values of one or more fields and/or validation formulas to determine
18 whether a value in a field satisfies a constraint; and
19 defining one or more fields that contain an approval workflow in the form of a
20 specification of the steps that need to be performed to accomplish approval by
21 management to carry out said service action.